

**STATEMENT OF WORK
RFQ-RT-02-00248**

**SPECIFICATIONS
Automated Chemistry Analyzer(ACA)**

1. The unit must be capable of analyzing water samples using discrete (individual) analysis of batches of samples by colorimetric chemistry with the option for use of ion specific electrode (ise) if required.
2. The unit must be capable of analyzing ammonia, ortho-phosphorus, total-phosphorus, nitrate + nitrite (by cadmium reduction), total kjeldahl nitrogen, chloride and sulfate with the quality control and methods or equivalents listed on the attached table of specification of individual analyses.
3. The unit must employ a dual beam digital detector with a range of 0.0001 to 2,500 AUFS and a resolution of 0.0001 AUFS.
4. The unit must provide a series of optical filters ranging from 460 to 880 nm as required by individual methods.
5. The System software must provide automated method changeover from one analyte (i.e. ammonia to TKN to ortho or total phosphorus etc.) to the next. It must also perform automatic standard preparation, sample dilution, sample spikes and unattended operation and shutdown.
6. The units must provided capacity for up to 16 different reagents and a sample capacity of up to 126 cups with continuous reloading if required.
7. The unit must be able to perform up to 180 tests per hour with sample and or reagent consumption of <0.3ml per test using the micro pipettor system.
8. The unit must use semi-disposable 1cm path-Length cuvetes that are automatically cleaned after each analyte batch to allow continuous multi analyte analysis of each sample as required.

Specification of Individual Analyses

1. **Orthophosphate (EPA 365.1)**
5-500 ppb linear calibration range ($r^2 > 0.995$)
<10% RPD replicate precision
90-110% spike recovery
90-110% performance evaluation sample recoveries
2. **Ammonia (EPA 350.1)**
5-500 ppb linear calibration range ($r^2 > 0.995$)
<10% RPD replicate precision
90-110% spike recovery
90-110% performance evaluation sample recoveries
3. **Nitrate (EPA 353.2)**
50 ppb- 5 ppm linear calibration range ($r^2 > 0.995$)
<10% RPD replicate precision
90-110% spike recovery
90-110% performance evaluation sample recoveries
4. **Total phosphorus (EPA 365.4)**
10 ppb- 5 ppm linear calibration range ($r^2 > 0.995$)
<10% RPD replicate precision
90-110% spike recovery
90-110% performance evaluation sample recoveries
5. **Total Kjeldahl Nitrogen (EPA 351.2)**
10 ppb- 5 ppm linear calibration range ($r^2 > 0.995$)
<10% RPD replicate precision
90-110% spike recovery
90-110% performance evaluation sample recoveries
6. **Chloride (EPA 325.1)**
2 - 250 ppm linear calibration range ($r^2 > 0.995$)
<10% RPD replicate precision
90-110% spike recovery
90-110% performance evaluation sample recoveries
7. **Sulfate (EPA 375.1)**
5 - 500 ppm linear calibration range ($r^2 > 0.995$)
<10% RPD replicate precision
90-110% spike recovery
90-110% performance evaluation sample recoveries

Evaluation Criteria:

The Government intends to award a single purchase order to responsible offer whose technically acceptable proposal represents the best overall value to the Government based on evaluation of the factors listed below. Award will be made based on a determination of best value to the Government.

1. Technical:

The specifications in the Statement of Work represent the Governments's minimum needs. Proposals must include sufficient material (such as narrative technical specifications, drawing, photos, brochures, demo disks, videos, etc.) to permit the Government to determine that the proposed Analyzer will meet the requirements set forth in the Statement of work.

2. Price:

Price is considered of equal importance to all other factors.